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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,054	04/24/2001	Robert Wilhelm Schumann	1005-7U	3693

23975 7590 07/21/2004

DAVID G GROSSMAN
1408 BAYSHIRE LANE
HERNDON, VA 20170

EXAMINER

JOHNS, ANDREW W

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 07/21/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary

Application No.

09/840,054

Applicant(s)

SCHUMANN ET AL.

Examiner

Andrew W. Johns

Art Unit

2621

All participants (applicant, applicant's representative, PTO personnel):

(1) Andrew W. Johns, primary examiner.

(3) Robert Schumann, inventor.

(2) David Grossman, inventor.

(4) _____.

Date of Interview: 14-15 July 2004.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____.

Claim(s) discussed: 1 and 25.

Identification of prior art discussed: Epstein et al. (US 6,529,600 B1).

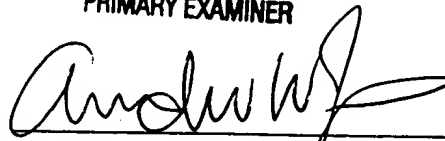
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

ANDREW W. JOHNS
PRIMARY EXAMINER


Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner.
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner indicated that new prior art to Epstein et al. had been brought to his attention, and pointed out how Epstein et al. appeared to anticipate at least the independent claims. As an alternative to withdrawing application from issue and reopening prosecution, Examiner proposed amending the claims to clearly distinguish over Epstein et al. (see attachment A). Specifically, the claims read on the temporal modulation represented by the variations of the frame, line and/or pixel rate described by Epstein et al. Examiner indicated that Epstein et al. failed to provide any suggestion of using spatial patterns to create a spatial modulation. The proposed amendment to claims 1 and 25 adds language to the claims to limit the claims to the use of such spatial patterns used to spatially modulate the light beam. Applicant reviewed examiner's proposal and indicated that they weren't completely comfortable with the terminology "spatially" modulating. Applicant proposed that these recitations be changed to read "selectively" modulating (see attachment B) and further indicated that in light of these amendments, they would like to add additional dependent claims. Examiner indicated that these modifications would need to be fully addressed with respect to the prior art, and that such consideration would require that prosecution be reopened. Since the examiner's proposed amendment is not acceptable to applicant, the application will be withdrawn from allowance and the prosecution reopened.



UNITED STATES PATENT AND TRADEMARK OFFICE

Attachment A to
Paper #6

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Fax Cover Sheet

Date: 06 Jul 2004

To: David Grossman	From: Andrew W. Johns
Application/Control Number: 09/840,054	Art Unit: 2621
Fax No.: (571) 323-0071	Phone No.: (703) 305-4788
Voice No.: (571) 323-0070 ext. 3750	Return Fax No.: (703) 872-9306
Re: 1005-7U	CC:

☒ **Urgent** ☒ **For Review** ☐ **For Comment** ☒ **For Reply** ☐ **Per Your Request**

Comments:

Please review the attached proposal and contact the Examiner to discuss this application as soon as possible.

Number of pages 14 **including this page**

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Mr. Grossman:

While a Notice of Allowability was mailed in the above referenced application on 19 May 2004, a new reference has just come to my attention that raises a prior art issue with respect to independent claims 1 and 25. Specifically, claims 1 and 25 appear to be anticipated under 35 USC 102(e) by Epstein et al. (US 6,529,600 B1, attached hereto), as follows:

Epstein et al. teaches a method and apparatus for visual copyright protection (*column 1, lines 9-11*), including inputting light from a light source (*Epstein et al. shows a DMD type electronic projector 10 which inherently includes a light source*); selecting a disruptive light modulation pattern based upon a criterion (*i.e., choosing a variation in frame, line, and/or pixel rate; column 4, lines 59-60; this variation in frame, line and/or pixel rate is a **temporal** pattern that disrupts the modulation of the light*), the criterion being how said pattern is perceived by an IRD and a human differently (*column 4, lines 60-65*); modulating a light array having at least one element, using the disruptive light modulating pattern (*Epstein et al. in Figures 2 and 3 shows the disruptive pattern being fed from frequency controller 16 to timing 14 and array 12, the array 12 (DMD) has at least one element (i.e., an array of elements) which modulate light based on the modulation control from timer 14*); projecting said light onto said light array producing a modulated light beam (*this is inherent in any DMD projection display, i.e., once the modulation control has been set on each DMD mirror, light is projected on the display*); and outputting said modulated light beam (*the device of Epstein et al. then projects the modulated light beam as shown in the upper right corner of projector 10 in Figures 2 and 3*).

The specification of the instant application lists numerous disruption patterns and methods. These methods and patterns include the methods disclosed by Epstein et al. For example, page 12, paragraph [0053] of the application discusses disrupting an IRD by varying the timing of the displayed image and “producing images that are basically incompatible with the timing of the IRD may result in anomalous images” (paragraph [0053]). Compare to Epstein et al., column 3, lines 40-45.

However, the specification also describes disruption patterns that are spatial in nature and which function to modulate the light beam spatially rather than temporally. See for example Figures 19 and 20 of the instant application and the corresponding description in paragraphs [0102] and [0103] of the specification, for example. There is no suggestion in Epstein et al. that the disruption modulation of the light beam can be performed using spatial patterns to create a spatial modulation, because the disruption pattern of Epstein et al. is temporal in nature (i.e., it

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varies the frame, line and/or pixel rate in the time domain) and produces a temporal disruption modulation of the light beam (i.e., the light is also modulated in the time domain).

Because the issue fee has not yet been paid, I would like to propose a supplemental examiner's amendment to better define the claimed invention, to avoid having to withdraw the application from issue and re-open prosecution. Specifically, I would like to suggest that the claimed invention be amended to clearly define the disruption modulation pattern as being a spatial pattern that produces a spatial modulation of the light beam. Such language would clearly overcome the issue(s) raised by Epstein et al., since there is no suggestion therein for such spatial disruption of the light beam.

Specifically, I would propose the following amendments to claims 1 and 25:

1. (Amended) A method for visual copyright protection comprising the steps of:

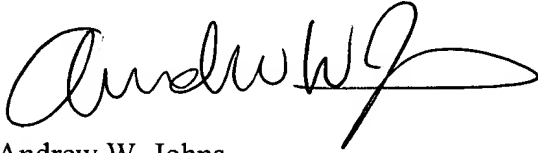
- (a) inputting light from a light source;
 - (b) selecting a disruptive light modulating spatial pattern based upon a criterion, said criterion being how said pattern is perceived by an IRD and a human differently;
 - (c) spatially modulating a light array, having at least one element, using said disruptive light modulating spatial pattern;
 - (d) projecting said light onto said light array producing a spatially modulated light beam;
- and
- (e) outputting said spatially modulated light beam.

25. (Twice Amended) An apparatus for visual copyright protection comprising:

- (a) a light source capable of producing light;
- (b) a light array, having at least one element, capable of acting on the light to produce a spatially modulated light beam;
- (c) a light array controller for spatially modulating said light array using at least one disruptive light spatial pattern; and
- (d) a disruption processor for producing said at least one disruption light spatial pattern based upon a criterion, said criterion being how said pattern is perceived by an IRD and a human differently.

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After reviewing this proposal and the file, please contact me at (703) 305-4788 as soon as possible to discuss this case. In order to minimize delays in the allowance of this application, I would like to get this supplemental amendment entered as quickly as possible. With your approval, these changes would be entered by a supplemental examiner's amendment and a supplemental Notice of Allowability prepared.

A handwritten signature in black ink, appearing to read "Andrew W. Johns", with a long horizontal flourish extending to the right.

Andrew W. Johns
Primary Examiner
Art Unit 2621
(703) 305-4788

1.. (Amended) A method for visual copyright protection comprising the steps of:

- (a) inputting light from a light source;
- (b) selecting a disruptive light modulating spatial pattern based upon a criterion, said criterion being how said pattern is perceived by an IRD and a human differently;
- (c) selectively modulating a light array, having at least one element, using said disruptive light modulating spatial pattern;
- (d) projecting said light onto said light array producing a selectively modulated light beam;
- and,
- (e) outputting said selectively modulated light beam.

25. (Twice Amended) An apparatus for visual copyright protection comprising:

- (a) a light source capable of producing light;
- (b) a light array, having at least one element, capable of acting on the light to produce a selectively modulated light beam;
- (c) a light array controller for selectively modulating said light array using at least one disruptive light spatial pattern; and
- (d) a disruption processor for producing said at least one disruption light spatial pattern based upon a criterion, said criterion being how said pattern is perceived by an IRD and a human differently.